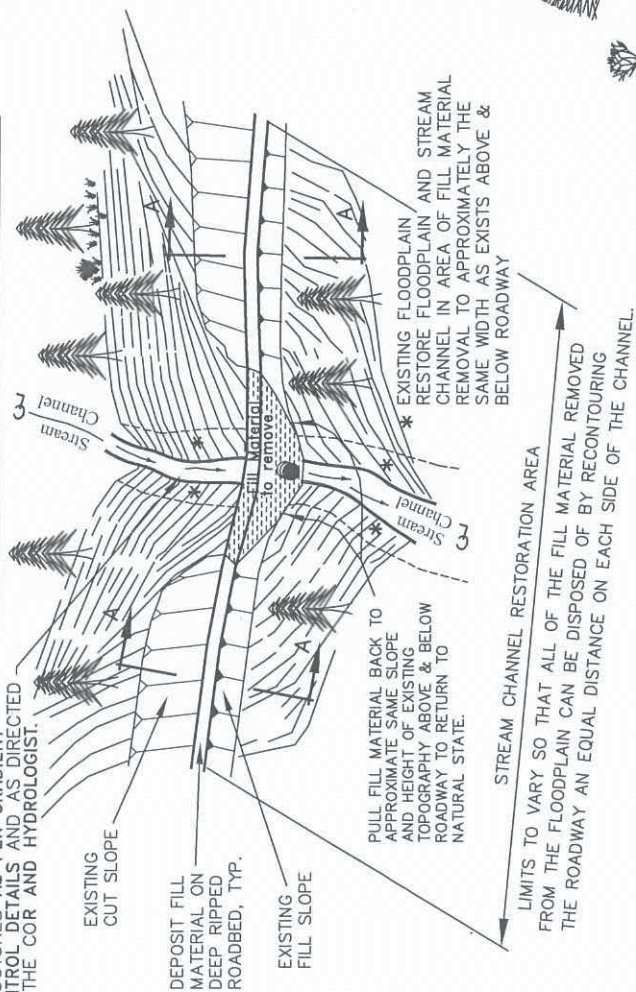


## Attachment C

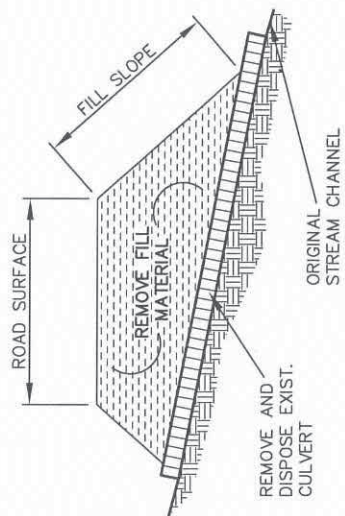
## STREAM CHANNEL RESTORATION

PLACE GRADIENT CONTROL STRUCTURES AS PER GRADIENT CONTROL DETAILS AND AS DIRECTED BY THE COR AND HYDROLOGIST.

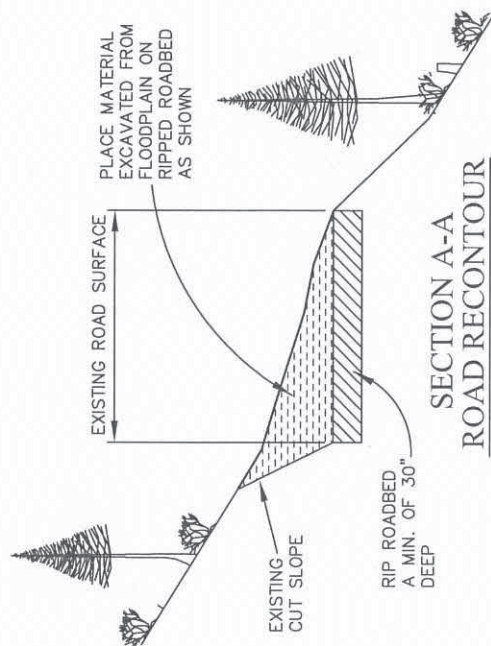


### NOTES:

1. REMOVE ALL FILL MATERIAL FROM FLOODPLAIN DOWN TO THE ORIGINAL CHANNEL. PLACE REMOVED MATERIAL ON THE DEEP RIPPED ROADBED. DO NOT DEPOSIT MORE OF THIS MATERIAL THAN WAS ORIGINALLY IN PLACE PRIOR TO ROAD CONSTRUCTION. FULLY RECONTOUR THE ADJACENT ROADWAY WITHIN THE STREAM CHANNEL RESTORATION AREA BY PULLING UP THE ROADWAY FILL. PLACING THE FILL ONTO THE ROADWAY, AND CONTOURING IT TO THE ADJACENT ORIGINAL GROUND SLOPES. ADJUST LIMITS OF STREAM CHANNEL RESTORATION AREA SO THAT ALL EXCAVATED MATERIAL IS USED TO RECONTOUR THE ROADBED AS SHOWN ON THIS SHEET.
2. DISTANCES FOR STREAM CHANNEL RESTORATION MAY BE ADJUSTED TO EITHER SIDE OF THE CHANNEL TO ACCOMMODATE OVERLAPPING SECTIONS WHERE STREAMS ARE CLOSE TOGETHER.
3. SCATTER AVAILABLE WOODY DEBRIS ON THE FINISHED SLOPE. PLACE LARGER WOOD AND ROCK ON THE FLOODPLAIN.
4. TREATMENT OF RESTORED CHANNEL WILL INCLUDE FURNISHING AND INSTALLING TEMPORARY AND PERMANENT SEDIMENT CONTROL MEASURES AS DETERMINED NECESSARY BY COR, MULCHING THE DISTURBED AREA WITH WEED FREE STRAW MULCH, AND REMOVING AND DISPOSING OF THE EXTRACTED CMP FROM THE JOBSITE.



### TYPICAL SECTION- STREAM CHANNEL



EUSTACHE CREEK REHABILITATION			TOTAL
Road Decommissioning & Stream Channel Typical			17
			14

TOTAL

SHEET

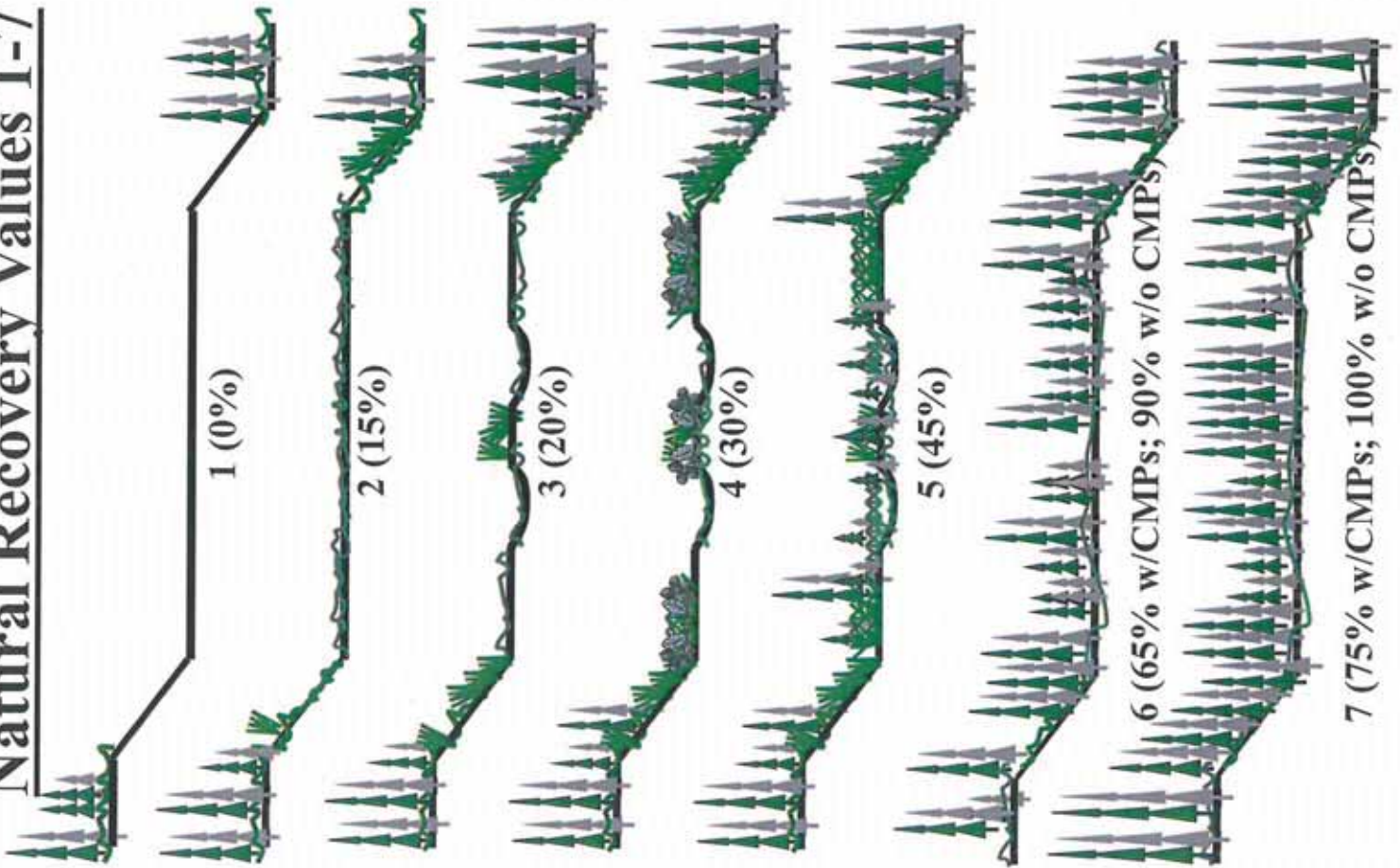
EUSTACHE CREEK REHABILITATION

Road Decommissioning &amp; Stream Channel Typical

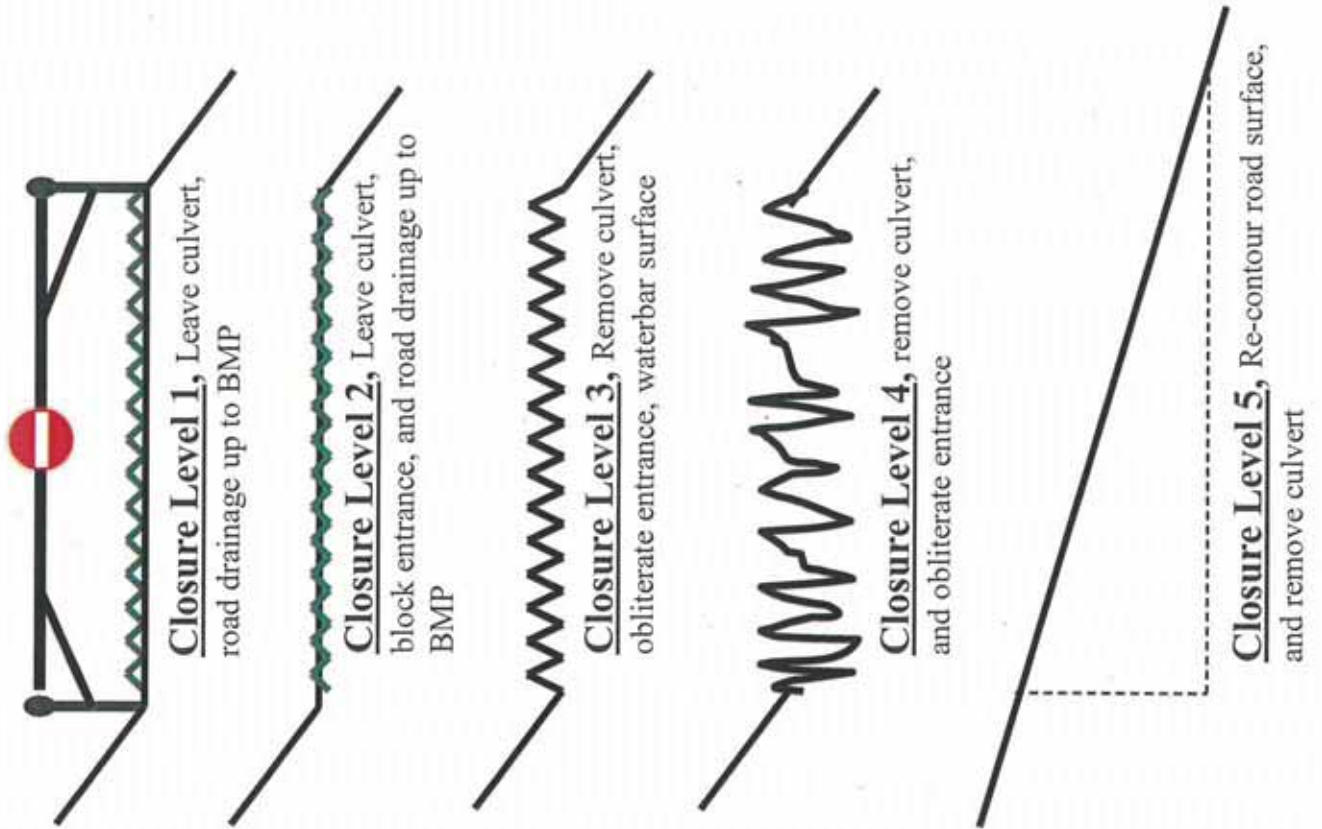
14

17

## Natural Recovery Values 1-7



## Road Closure Levels



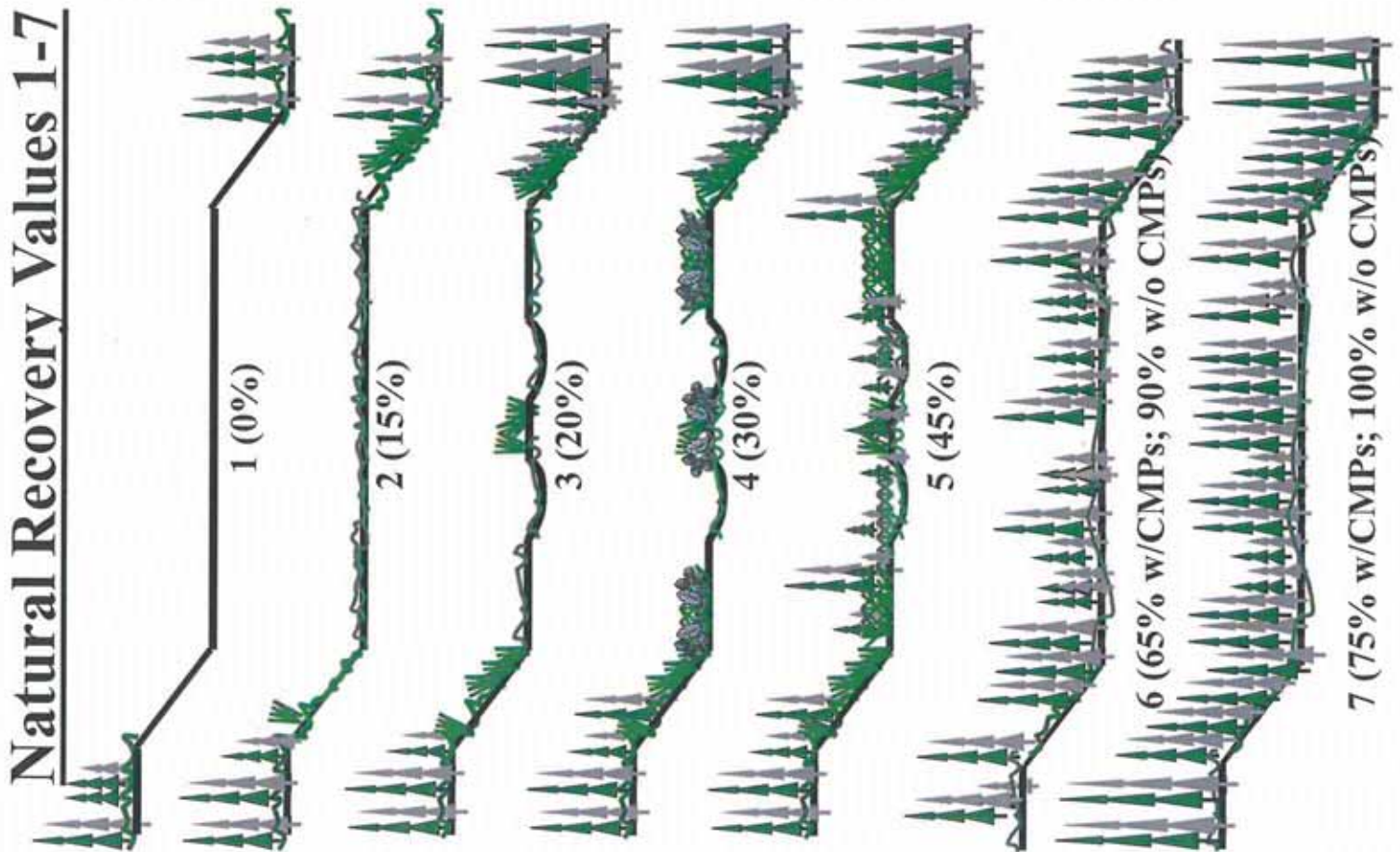


## Road Closure Levels

Lolo Web/Program Area//Engineering Tools/References December 2010

Level Allowed Suffix /E, /P /E Entrance Oblit, /P Path	Typical Device Site specific situation dependant	Typical Treatment All treatments are as-needed.	Status
<b>1</b>	Gate	-Blade, seed, fertilize; Normal drainage (BMP's) -Treat noxious weeds	Remains as NFSR as either long-term or intermittent term service.
<b>2</b>	Gate, guardrail, concrete, earth barrier or re-contour intersection	-Type III dip, waterbars OR outslope -Scarify, seed, fertilize -May scatter slash -Treat noxious weeds	Remains as NFSR as either long-term or intermittent term service with gate, or intermittent term service with barrier.
<b>3-SN</b> Natural Storage	Re-contour intersection (entrance oblit) or rock/earth barrier as needed.	No physical or weed treatment needed, Naturally revegetated and stabilized. -Waterbar or outslope -Remove CMP's & restore watercourse -Ditch relief pipes can remain w/ waterbars -Light scarify, seed, as needed -Treat noxious weeds	S- Remains as NFSR as intermittent stored service.
<b>3-DN</b> Natural Decommission	Re-contour intersection (entrance oblit) or rock/earth barrier as needed.	No physical or weed treatment needed, Naturally revegetated and stabilized. -Waterbar or outslope -Remove CMP's & restore watercourse -Scarify or Rip 6-12", seed, fertilize as needed -Scatter slash on slopes, -Treat noxious weeds.	D- Road is not needed for long term use. Remove from NFSR by route status change to decommissioned. Effectiveness monitored.
<b>3-D</b> Decommission	Re-contour intersection (entrance oblit) or rock/earth barrier	-Waterbar, outslope or selective re-contour -Remove all CMP's & restore watercourse -Rip 12-18", seed, fertilize -Scatter slash on slopes -Treat noxious weeds	Road is not needed for long term use. Remove from NFSR by route status change to decommissioned. Effectiveness monitored.
<b>4</b> Decommission	Re-contour intersection (entrance oblit) or rock/earth barrier	-Re-contour entire prism -Remove all CMP's and restore watercourses -Seed and fertilize -Scatter slash on slopes -Treat noxious weeds	Road is not needed for long term use. Remove from NFSR by route status change to decommissioned. Effectiveness monitored.

## Natural Recovery Values 1-7



## NRV Definitions

**Natural Recovery Value 0%** – Road may be driven with passenger vehicles. Road surface contains little vegetation due to routine grading and use. Cuts and fills have exposed soil, light grass, and brush with little protection against erosion.

**Natural Recovery Value 15%** – Road may be driven with high clearance vehicles with normal driver observation. Road surface contains grass sod or sparse brush and trees. Cuts and fills have little exposed soil, are vegetated with grass and brush and young trees, and have adequate protection against erosion.

**Natural Recovery Value 20%** – Road may be driven with high clearance vehicles with moderately-high driver observation. Road surface is well vegetated with grass sod. Road center and shoulders are vegetated with young brush and trees. Cuts and fills have no exposed soils and are well vegetated with brush and young trees with good protection against erosion.

**Natural Recovery Value 30%** – Road may be driven with high clearance vehicles or OHVs with high driver observation. Road surface is well vegetated with grass sod and brush. Wheel tracks are still compacted with only grass or sparse brush vegetation. Road center and shoulder are vegetated with mature brush and young trees. Cuts and fills have no exposed soil and are well vegetated with brush and trees with very good protection against erosion.

**Natural Recovery Value 45%** – Road may not be driven by any vehicles. Road surface, is well vegetated with brush and young trees. Wheel tracks are still evident yet are fully vegetated with brush and young trees. Cuts and fills have no exposed soil and are well vegetated with trees and brush with very good protection against erosion.

**Natural Recovery Value 65 or 90%** – Road may not be driven by any vehicles. Road surface is very well vegetated with trees and brush and shallow humus layer established. Road profile is deteriorating and road surface is less visually dominant. Cuts and fills have trees and other vegetation like adjacent forested environment.

**Natural Recovery Value 75 or 100%** – Road may not be driven by any vehicles. Road surface and cuts and fills have humus, trees and other vegetation like adjacent forested environment. Road profile has deteriorated and road profile is no longer visually dominant.



## Attachment D



United States  
Department of  
Agriculture

Forest  
Service

Lolo National Forest

Building 24, Fort Missoula  
Missoula, MT 59804-7297  
406 329-3750

File Code: 2500

Date: November 24, 2014

Michelle McGree  
Future Fisheries Improvement Program Officer  
Montana Fish, Wildlife & Parks  
1420 East Sixth Avenue  
P.O. Box 200701  
Helena, MT 59620-0701  
406-444-2432

To Ms. McGree and the Future Fisheries Panel,

The Missoula Ranger District strongly supports the Clark Fork Coalition's grant application for the Upper Lolo Sediment Reduction and Fisheries Connectivity Project. The Clark Fork Coalition is applying for Future Improvement funds to work with the Lolo National Forest to decommission impactive roads in the East Fork of Lolo Creek and other tributaries on lands previously owned by private industry. Primary goals are native fish connectivity and reducing sediment deliveries.

The Clark Fork Coalition is rigorously leading efforts to address these issues by working closely with Lolo National Forest staff for all project phases. In 2009, the Lolo National Forest acquired over 32 square miles of forest lands in Upper Lolo Creek that are significantly impacted by sediment generated by forest roads and failing culverts. Montana Department of Environmental Quality has established significant sediment reduction goals in this area of former checkerboard pattern land ownership. Prior to the land acquisition, the Lolo National Forest had previously decommissioned over 100 miles of road and replaced 10 priority undersized culverts to establish fish passage. This project is a continuation of that term restoration effort.

Tight budgets and limited staffing makes working collaboratively and championing these efforts more of a priority than ever. The headwaters of Upper Lolo Creek are projected to remain cold in climate projection models and therefore are expected to be even more vitally important in the future. We appreciate the Clark Fork Coalition's assistance, and we need this support to continue our important work in these tributaries.

Thank you very much for the funding opportunity and your continued work for conserving natural resources. Please do not hesitate to contact me if you have any questions.

Sincerely,

/s/ Jennifer Hensiek  
JENNIFER HENSIEK  
Missoula District Ranger

cc: Dustin Walters, Shane Hendrickson





United States  
Department of  
Agriculture

Forest  
Service

Lolo National Forest

Building 24, Fort Missoula  
Missoula, MT 59804-7297  
406 329-3750

File Code: 2500

Date: November 24, 2014

Future Fisheries Program  
Montana Fish, Wildlife & Parks  
1420 East Sixth Avenue  
P.O. Box 200701  
Helena, MT 59620-0701  
406-444-2432

To Future Fisheries Panel Members,

I'm writing this letter for your consideration in funding the grant application submitted by the Clark Fork Coalition (CFC) for the Upper Lolo Creek Sediment Reduction and Fisheries Connectivity Project. The CFS's efforts and funding support are an instrumental component to our resource improvement needs in Upper Lolo Creek, which is dominated by a very large road network within what was formerly "checker-board" ownership between industrial forestry lands and the Lolo National Forest (LNF). Recently, the industrial land has transferred into public ownership under the jurisdiction of the LNF. As you may be aware, Upper Lolo Creek is MT DEQ 303(d) listed impaired water body and designated critical bull trout habitat by the U.S. Fish and Wildlife Service.

The change in land ownership enables an outstanding opportunity to develop a minimal road system and eliminate roads that are problematic to fisheries and water quality. Your assistance is needed to provide the collaboration and funding support necessary to leverage additional funds and achieve these goals. The LNF is currently limited in staffing and funding necessary to address the needs, and the Clark Fork Coalition is a proven, highly successful organization with whom the Forest is aligning to co-tackle the issues and make the necessary water and fish improvements occur.

The LNF has a long history of restoration investment in Upper Lolo Creek since the late 1980s, and there is much more to accomplish. Before the land acquisition, Missoula Ranger District had recently decommissioned over 100 miles of road with nearly 65 miles of active road treatments, including recontouring, removing almost 40 culverts, and resizing 10 culverts to pipe-arches or bridges that provide fish passage through stream simulation methods and 100-yr design flow accommodation.

This proposed effort championed by the Clark Fork Coalition would focus on decommissioning very specific roads – roads that are sediment sources, and roads that impede fish passage. Please assist us in our collaborative efforts by supporting CFC's grant application. Thank you for your time and consideration.

Sincerely,

/s/ Traci Sylte  
TRACI SYLTE  
Soil, Water, and Aquatics Program Manager  
Lolo National Forest

cc: Dustin Walters, Shane Hendrickson, Jennifer Hensiek







*WestSlope Chapter of Trout Unlimited,  
PO Box 7165, Missoula, MT 59807-7165  
406-546-3005*

September 25, 2014

To Whom It May Concern:

I am writing on behalf of WestSlope Chapter of Trout Unlimited in order to show our support of the Upper Lolo Sediment Reduction Project.

We have always been in favor of the decommissioning of roads and their associated culverts that have historically added sediment to the Clark Fork and surrounding watersheds. We have supported many such projects financially as part of our work. When a large-scale well planned project such as this one has objectives that include monitoring for project effectiveness and outreach to educate members of the community and government agencies, we couldn't be more pleased.

The main goals of WestSlope Chapter of Trout Unlimited are to conserve, protect and restore our area's cold-water fisheries and their watersheds. These goals also include educating the public on the importance of clean cold water and healthy fisheries. For these reasons WestSlope Chapter of Trout Unlimited supports The Upper Lolo Sediment Reduction Project both philosophically and financially.

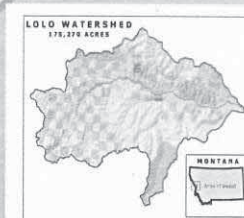
Sincerely,

*James Short*

James Short  
President, WestSlope Chapter of Trout Unlimited



*The mission of the LWG is to understand and conserve the unique characteristics of the Lolo Creek Watershed, including its wildlife and fisheries, scenic and rural character, local agriculture, and recreational opportunities while supporting private property and water rights*



September 26, 2014

To Robert Ray, Watershed Protection Section Supervisor Water Quality Planning Bureau  
Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901  
RE: Support for Clark Fork Coalition 319 project proposal

Lolo Creek has been classified as impaired due to sedimentation throughout many tributaries and the main stem of Lolo Creek. In the upper reaches of Lolo Creek, sedimentation sources include forest roads, some of which are no longer needed, with failing erosion control structures, and failing or undersized culverts. The Lolo Creek Watershed Restoration Plan specifies opportunities for improving the Lolo Creek cold-water fisheries and aquatic life and for reducing sedimentation. Those opportunities include removing roads that are no longer needed, removing inadequate culverts, and bringing remaining roads up to current Best Management Practice standards.

The project proposed by the Clark Fork Coalition will address sedimentation and fisheries concerns identified in the Lolo Creek Watershed Restoration Plan, meeting the plan's suggestions for restoration projects on 25 miles of forest roads. The Lolo Watershed Group supports this project proposal as a means to work toward meeting goals set in the Lolo Creek WRP.

Sincerely,

Roberta A. Bartlette

Roberta A. Bartlette  
President  
Lolo Watershed Group

## Attachment E



## **Upper Lolo Creek Sediment Reduction and Fisheries Connectivity Project**

### **H. Land Management and Maintenance Plan**

All land management and maintenance plans are addressed under mandates, standards, and guidance as required by the Lolo National Forest Plan and Inland Native Fish Strategy, in addition to other Executive Orders. These provisions require the Forest to “meet or exceed” State requirements, which manifests commonly in land management planning and implementation that far exceeds protections offered by other means. For additional and/or specific details, please reference the Forest Plan and/or Inland Native Fish Strategy. In addition, these tributaries are also delineated by the U.S. Fish and Wildlife Service within the Bull Trout Conservation Strategy as critical habitat, which also provides additional protections for current and future management. This project lies within the Lolo National Forest’s Management Area 16, which is currently designated as timber harvest. There is no merchantable timber, and will not be any for the next 50 years or more, in the areas accessed by the roads proposed for decommissioning. There are no plans by the forest service to open these roads up after decommissioning occurs, especially with the level that the roads will be decommissioned to (Level 5, full recontour). In terms of maintenance there should not be any needed due to the removal of all associated culverts and complete reconstruction of the road prism back to native state.